DETAILED ACTION

Specifications

The specification is missing BACKGROUND OF THE INVENTION, BRIEF SUMMARY OF THE INVENTION, DETAILED DESCRIPTION OF THE INVENTION. The following guidelines illustrate the preferred layout for the specification of a utility application. These guidelines are suggested for the applicant's use.

Arrangement of the Specification

As provided in 37 CFR 1.77(b), the specification of a utility application should include the following sections in order. Each of the lettered items should appear in upper case, without underlining or bold type, as a section heading. If no text follows the section heading, the phrase "Not Applicable" should follow the section heading:

(a) TITLE OF THE INVENTION.

(b) CROSS-REFERENCE TO RELATED APPLICATIONS.

(c) STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT.

(d) THE NAMES OF THE PARTIES TO A JOINT RESEARCH AGREEMENT.

(e) INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A COMPACT DISC.

(f) BACKGROUND OF THE INVENTION.

(1) Field of the Invention.

(2) Description of Related Art including information disclosed under 37 CFR 1.97 and 1.98.

(g) BRIEF SUMMARY OF THE INVENTION.

(h) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).

(i) DETAILED DESCRIPTION OF THE INVENTION.

(j) CLAIM OR CLAIMS (commencing on a separate sheet).

(k) ABSTRACT OF THE DISCLOSURE (commencing on a separate sheet).

(l) SEQUENCE LISTING (See MPEP § 2424 and 37 CFR 1.821-1.825. A "Sequence Listing" is required on paper if the application discloses a nucleotide or amino acid sequence as defined in 37 CFR 1.821(a) and if the required "Sequence Listing" is not submitted as an electronic document on compact disc).

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

1. Claims 1,2,4,6-9,11-14 are rejected under 35 U.S.C. 102(b) as being anticipated by Johnson et al. (5,606,444).

Consider claim 1, Johnson discloses a base for wireless connection of terminals to a communications network **(See Col. 3 lines 28-38, fig. 3 i.e. a wireless**

communication network for establishing a communication between an aircraft computer system and a ground computer system), said base including transmit/receive means adapted to exchange information with a remote terminal also provided with transmit/receive means**(See Col. 4 lines 29-40, fig. 3 i.e. the ground base station(112) has a transmitter(36) and a receiver(38); and the aircraft station(14) which is the remote station also has a transmitter(36) and a receiver(38) to exchange information between the two stations)**, wherein the transmit/receive means of the base include a transmitter including an extended infrared light source**(See Col. 3 lines 34-44, i.e. as shown in fig. 3,4, the transmitter/receiver of the base ground station has an infrared transmitting source(36) for transmitting extended infrared signals through the beam forming shroud(34) and the infrared windows(50))**.

Consider claim 2, Johnson discloses an optical base according to claim 1, wherein the transmitter of the base is adapted to transmit information to a remote terminal at a high bit rate**(See Col. 2 lines 29-32, Col. 3 lines 51-56 i.e. transmitting data between the base and the remote station at a high bit rate)**.

Consider claim 4, Johnson discloses a base according to claim 1, wherein the extended infrared source includes laser emitter means and transmission diffuser means for diffusing radiation emitted by the laser emitter means **(See Col. 4 lines 51-53 and lines 34-44, fig. 4 i.e. as shown in fig. 4 the infrared transmitter source(36) includes one or more infrared light emitting diodes(42) and a beam forming**

horn(44) for distributing the light emitted from the infrared LED(42) to the coverage area of the receiver(38) of the remote station).

Consider claim 6, Johnson discloses a base according to claim 1, wherein the extended infrared source includes laser emitter means and reflector means for diffusing radiation emitted by the laser emitter means**(See Col. 4 lines 51-53 and lines 34-44, Col. 4 line 67-Col. 5 line 3, fig. 4 i.e. as shown in fig. 4 the infrared transmitter source(36) includes one or more infrared light emitting diodes(42) and a beam forming horn(44), which is coated with a reflective material, distributes the light emitted from the infrared LED(42) to the coverage area of the receiver(38) of the remote station)**.

Consider claim 7, Johnson discloses a base according to claim 1, wherein the transmit/receive means of the base include an omnidirectional receiver**(See fig. 3 i.e. as illustrated in fig. 3 For one receiver(38) at the ground base there is a corresponding transmitter(36) at the remote station and the transmission take places between one transmitter(38) and one receiver(36) in one direction. Since the receiver(38) receives in one direction, it implies that the receiver is an omni-directional receiver)**.

Consider claim 8, Johnson discloses a base according to claim 7, wherein the omnidirectional receiver includes at least an omnidirectional concentrator **(See Col. 5 lines 37-45, Col. 4 lines 45-51, fig. 3,4 i.e. as illustrated in fig. 3 For one receiver(38 of fig. 3) at the ground base there is a corresponding transmitter(36 of fig. 3) at the remote station and the transmission take places between one transmitter(38**

of fig. 3) and one receiver(36 of fig. 3) in one direction. Since the receiver(38 of fig. 3) receives in one direction, it implies that the receiver is an omni-directional receiver. This omnidirectional receiver(38 of fig. 4) comprises a concentrator(64 of fig. 4)).

Consider claim 9, Johnson discloses a base according to claim 8, wherein the omnidirectional concentrator is hemispherical and includes an optical filter**(See Col. 2 lines 45-51, Col. 5 lines 37-45, fig. 4,3 i.e. For one receiver(38 of fig. 3) at the ground base there is a corresponding transmitter(36 of fig. 3) at the remote station and the transmission take places between one transmitter(38 of fig. 3) and one receiver(36 of fig. 3) in one direction. Since the receiver(38 of fig. 3) receives in one direction, it implies that the receiver is an omni-directional receiver. this omnidirectional receiver(38) comprises a parabolic concentrator(64 of fig. 4) and a filter)**.

Consider claim 11, Johnson discloses a method of wireless communication between a base for connection to a communications network and a remote terminal**(See Col. 3 lines 28-38, fig. 3 i.e. a wireless communication network for establishing a communication between an aircraft computer system and a ground computer system)**, said base including transmit/receive means adapted to exchange information with said terminal, which is also provided with transmit/receive means**(See Col. 4 lines 29-40, fig. 3 i.e. the ground base station(112) has a transmitter(36) and a receiver(38); and the aircraft station(14) which is the remote station also has a transmitter(36) and a receiver(38) to exchange information between the two**

stations), wherein the method comprises transmitting information with the transmit/receive means of the base to said terminal by means of a transmitter including an extended infrared light source**(See Col. 3 lines 34-44, i.e. as shown in fig. 3,4, transmitting information with the transmitter/receiver of the base ground station has an infrared transmitting source(36) for transmitting extended infrared signals through the beam forming shroud(34) and the infrared windows(50) to the remote station)**.

Considering Claim 12 Johnson discloses a method according to claim 11, wherein information is transmitted from the base to said terminal over an infrared link having a line of sight that is direct, non-direct, or hybrid**(See Col. 2 lines 29-36, fig. 3 i.e. the infrared transmission link between the ground base and the remote air craft station is non-direct since it is wirelessly transmitted)**.

Considering Claim 13 Johnson discloses a method according to claim 11, wherein the transmit/receive means of said terminal transmit information to the base over an infrared link having a line of sight that is direct or non-direct**(See Col. 2 lines 29-36, fig. 3 i.e. the infrared transmission link between the ground base and the remote air craft station is non-direct since it is wirelessly transmitted)**.

Considering Claim 14 Johnson discloses a method according to claim 11, wherein the information is transmitted between said terminal and the base in burst mode **(See Col. 4 line 62-66, fig. 4 i.e. the information transmitted from the transmitter(36) to the receiver(38) of the base ground station and the remote station is in wide angle or in burst mode)**.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Johnson et al. (5,606,444) in view of in view of Ranniger (3,778,616)

Consider claim 3, Johnson does not explicitly disclose a base according to claim 1, further comprising source position control means for obtaining optimum alignment of the source and the transmit/receive means of a terminal located in the coverage area of the base.

Ranniger teaches a source position control means for obtaining optimum alignment of the source and the transmit/receive means of a terminal located in the coverage area of the base**(See abstract, Col. 1 lines 1-5,22-27 and 61-65,fig. 1 i.e. an alignment system provided for accurately aligning and maximizing signal transmission of two stations(1,2) over a free-space communication. This communication system provides aligning means(10) for the transmitter(12) of the first station(1) and another aligning means(16) for the receiver(14) of the second station(2))**.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the invention of Johnson, and apply a source position control means for obtaining optimum alignment of the source and the transmit/receive

means of a terminal located in the coverage area of the base, as taught by Ranniger, thus providing an efficient signal transmission system by minimizing a signal loss between two stations by accurately aligning both the transmitting means and the receiving means of both stations, as discussed by Ranniger **(Col. 1 lines 23-27)**.

3. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Johnson et al. (5,606,444) in view of in view of Jiang et al. (5,946,121)

Considering Claim 5 Johnson does not specifically disclose a base according to claim 4, wherein the transmission diffuser means are of the holographic type.

Jiang teaches a base according to claim 4, wherein the transmission diffuser means are of the holographic type**(Col. 2 lines 45-55, Col. 3 lines 38-42 i.e. a holographic type diffuser)**.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the invention of Johnson, and modify the transmission diffuser means to be holographic type diffuser, as taught by Jiang, thus providing an efficient means of transmitting signal by using a holographic type diffuser which transmits the emitted signal to the destination with minimal signal loss, as discussed by Jiang **(Col. 2 lines 49-52)**.

4. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Johnson et al. (5,606,444) in view of in view of Murray et al.(6,829,442)

Consider claim 10, Johnson does not explicitly disclose a base according to claim 8, wherein the omnidirectional concentrator has been subjected to an anti-reflection surface treatment.

Murray teaches a base according to claim 8, wherein the omnidirectional concentrator has been coated with an anti-reflection surface treatment**(See Col. 1 lines 64-67 i.e. coating a similar hyperbolic concentrator(cpc) in the receiving unit with anti reflection coat).**

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the invention of Johnson, and apply an anti-reflection coating to the omnidirectional concentrator, as taught by Murray, thus providing a means to prevent the transmitted signal from being reflected back to the receiving unit, as discussed by Murray **(Col. 1 lines 66-67)**.

Conclusions

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hibret A. Woldekidan whose telephone number is (571)270-5145. The examiner can normally be reached on 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kenneth Vanderpuye can be reached on 5712723078. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/H. A. W./
Examiner, Art Unit 2613

/Kenneth N Vanderpuye/
Supervisory Patent Examiner, Art Unit 2613